

freight engines and 20 Atlantic type express locomotives have been received. The entire order was for 230 freight and 26 passenger engines. Of the order for 10,000 freight cars, about 3000 have been delivered. Between 100 and 125 freight cars are being delivered daily, and next week the delivery of the 70 passenger coaches will be commenced.

Locomotive Coaling Station, D., L. & W. R. R.

A new locomotive coaling station was recently completed at Harrison, N. J., for the Delaware, Lackawanna & Western R. R. It has a capacity of 200 tons, distributed in two bins, and is known as the balanced automatic bucket type.

The timber construction is of yellow pine, except the roof which is of hemlock, covered with Erhet's slag roofing. The upper part of the station is covered with Novelty siding. The foundations are of concrete, as also the track hopper, which is built under the coal supply track, which passes through the coaling station at an elevation a few feet higher than the outside coaling tracks. The track hopper is covered with a steel grating, located at the base of the rail, and can be taken up if necessary. The coal after passing to the hopper from the car previously placed over the same is delivered to two storage bins by means of two steel buckets, constructed of 1/4-in. steel, each with a capacity of one ton. The coal is transferred to the buckets from the track hopper by means of an automatic filling device, operated by the buckets. The steel buckets operate in wooden wells, and

are connected by wire rope to a single drum hoist, suspended from heavy timber in the upper part of the building. The buckets travel up and down between wooden steel capped uprights attached to the inner sides of the wells on opposite sides of the pocket. Cast iron rollers 6 ins. in diameter are fitted to the buckets, and pass between the uprights, thus providing an easy movement. While a loaded bucket is ascending in one well, an empty bucket is descending at the same speed into the well on the opposite side of the station.

The drum hoist is provided with friction clutches and controlling devices, making it possible for an operator to stop the movement of the buckets at any time. When a loaded bucket reaches the top of the well, it automatically discharges its contents into a pivoted steel chute, which is provided with a chain mechanism and operated from below. Through these chutes, there being two, one on each side of station, the coal passes to the storage bins. Delivery of coal from the bins to locomotive tenders on the tracks both sides of coaling station is made through four Link-Belt undercut gates and chutes. These chutes are arranged with hinged aprons and have a counterweighted mechanism to maintain an easy movement in raising and lowering them. The ends of the chutes are provided with metal hoods to prevent the coal from going beyond the locomotive tender. These chutes can easily be operated by one man, by the use of hand wheels, etc., placed within reach.

The power for operating this plant is supplied by a 10-horsepower motor, which is located in upper part of building, and is connected to driving

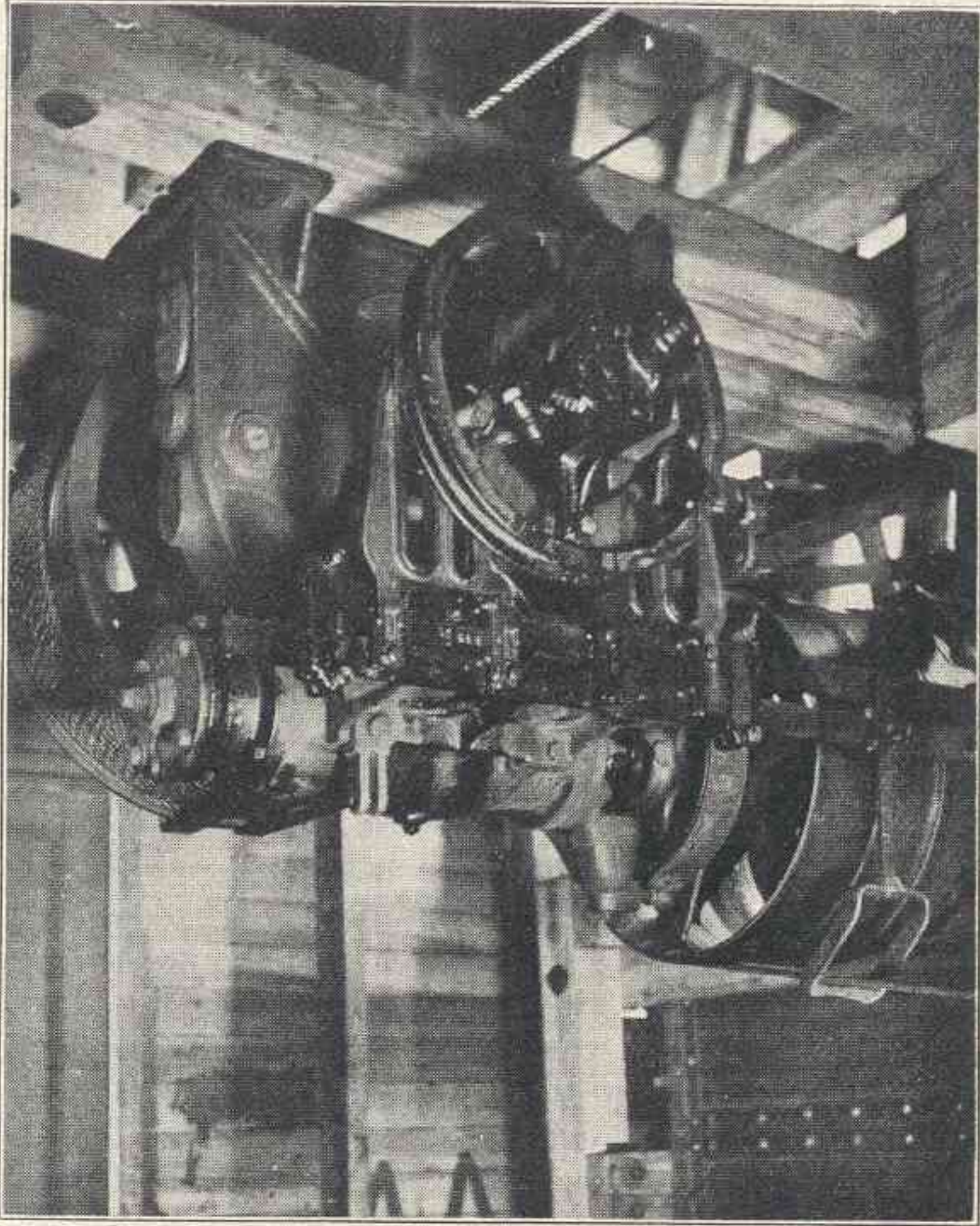


Fig. 3—Interior View, Upper Part of Coaling Station Showing Hoisting Machinery Suspended from Timber Work.

placed a smaller machine of the same class. It is electrically driven, and able to turn out about five times the amount of work done by the one it replaced. Eight modern engine lathes, a quadruple multiple drilling machine, a steam hammer for the blacksmith shop, numerous woodworking machines for the cabinet shop, an automatic turret lathe and various special machines have been installed. The lathes and drilling machines are electrically driven.

The new equipment orders are being filled rapidly. Up to the present time 100 consolidation

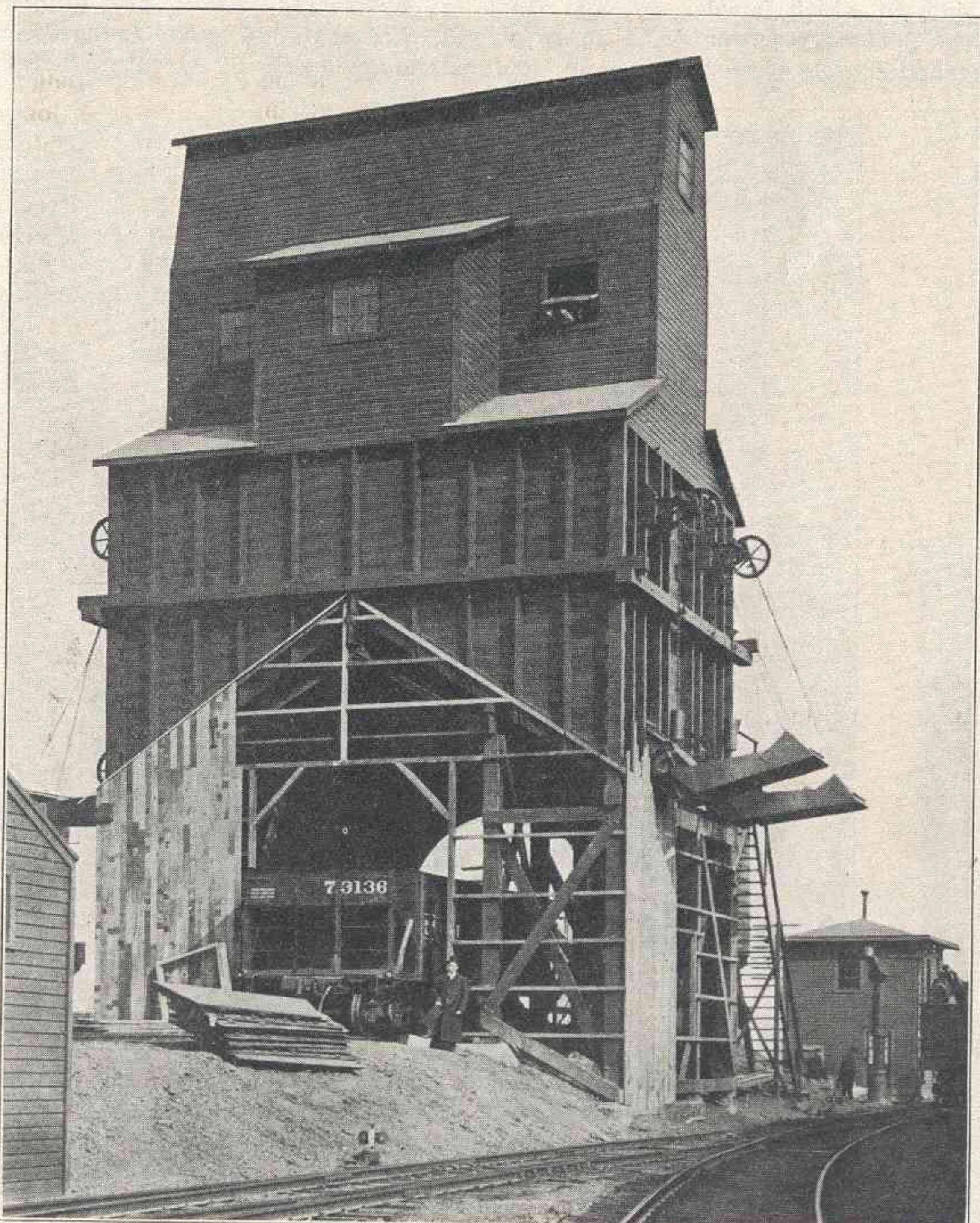


Fig. 1—Locomotive Coaling Station, D. L. & W. R. R., at Harrison, N. J.

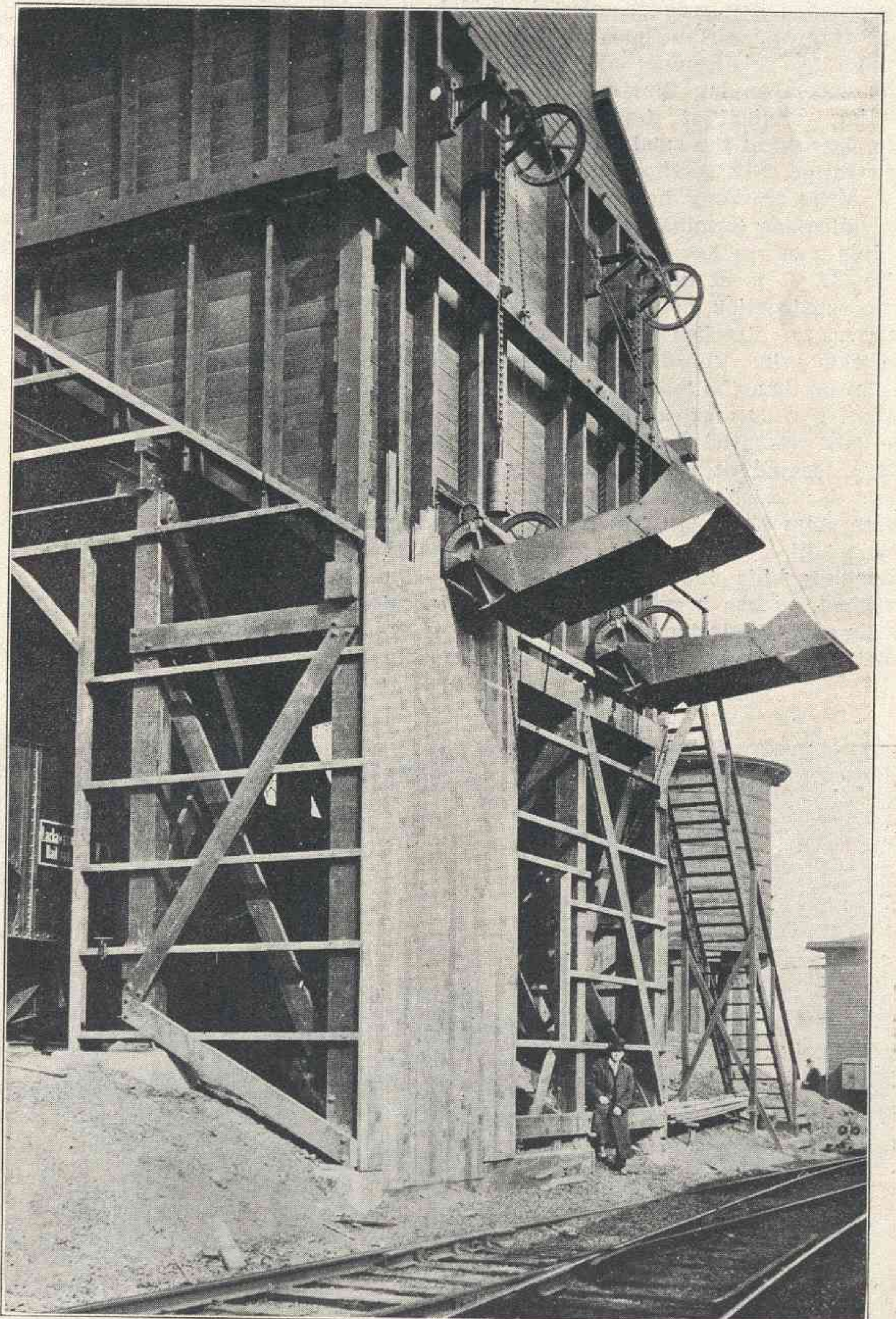


Fig. 2—View of South Side of D. L. & W. R. R. Coaling Station, Showing Chutes and Operating Mechanism.